Plant now for spring beauty!

As a botanist at the National Wildflower Research Center, one of the most common questions I receive during the fall season is, "What is the easiest way to plant wildflowers in my yard?"

Just like any project, incorporating native plants into an existing landscape can be as difficult or as simple as you want to make it. We use the following method at the Wildflower Center. It’s simple; any homeowner can use it to begin landscaping with native plants and wildflowers.

There are three basic steps to successfully planting wildflowers in your yard: plant selection, soil preparation and seeding, and maintenance.

- **Plant Selection.** Before you set out to use any native plant in your existing landscape, you need to look at your yard and decide what kinds of native plants and wildflowers will do well in the habitat your yard represents. Go into the surrounding countryside and observe plants growing in their natural environments. What is growing well along the roadsides near your home? Are the plants growing in a ditch full of water? In full sun, or partial or dappled shade?

  Determine which species grow together and which species are solitary. You don’t have to know every species that grows in your area, but a basic knowledge of the dominant species will give you a good idea of what might do well in your yard. Spend some time at your local native plant nursery. People who work with and propagate native plants will have a good idea of what species might do best in your yard. If you can duplicate at home what you have observed in nature, the wildflower species you choose will thrive in your yard.

- **Soil Preparation and Seeding.** Choosing plants that are appropriate to the microhabitats in your yard will eliminate the need for major soil preparation. In fact, disturbing the site can create more problems than it solves.

  If your site is not too weedy, and you plan to incorporate wildflowers into the existing vegetation, the first step is to mow the area to be seeded. Mow the vegetation at the lowest possible setting. This is known as "scalping" the area.

  Next, rake up as much of the thatch as possible to expose the ground and open up bare areas, allowing the seed to make good soil contact, which is essential for germination.

  Once the thatch has been removed, the next step is to sow your seeds. Hand broadcasting is the easiest and doesn’t require any special equipment. Seed each species separately because the different sizes and weights of the seeds make it difficult to evenly distribute each species. Adding fine, damp sand to the seeds, in a ratio of four parts sand to one part seeds, will ensure a more even distribution of each species.

  After seeding, lightly rake or tamp the area to ensure good seed-to-soil contact. Soil contact helps seeds retain water, which is important for germination, as well as provides a substrate for seedling growth.

  Rain is not expected within several days after planting, thoroughly water the area once following planting. Then, lightly water the area every two days for approximately one week.

- **Managing Your Wildflowers.** All landscapes need several years to become well established. Once established, your landscape will need minimal maintenance. However, some attention will be necessary during the establishment period.

  Depending on the look you want to achieve, you may want to prune or weed out fast-growing species and undesirable plants as they appear. Chipping seedheads encourages fullness and longer bloom periods for many perennial wildflowers. Some native shrubs and perennials respond

(Read on, page 3)
Lady Bird Johnson: A champion of nature

Although she has never liked the word beautification, many people believe it is synonymous with the name Lady Bird Johnson. For those who know of Mrs. Johnson's 80-year interest in the land's natural beauty and her commitment to its conservation, the true meaning of beautification is clear.

When Mrs. Johnson speaks of "Vermont in the fall," or "the understory of flowering dogwoods in the southeast each spring," or "the color and beauty of the desert after a seasonal rain," or "the orange blanket of California poppies," or "the colorful mosaic of fall grasses and wildflowers of the midwestern prairies," her definition of beautification becomes clear. Native flora defines a region's character, and Mrs. Johnson has had an abiding interest in regional floral beauty since childhood. It was her cause as First Lady during the mid-Sixties and it has continued through her founding of the National Wildflower Research Center in 1982.

Those of us who have worked with Mrs. Johnson during the Wildflower Center's early years find its growing stature an exciting and encouraging indicator for the future. The Center's visibility has grown from rare mentions in a few publications during the first few years to hundreds of articles in a wide variety of publications.

Many of these articles promote the Center's mission: the conservation and use of native plants in regional home landscape design. Establishing indigenous native plant populations along roadsides and in public spaces can reduce the need for high-cost maintenance such as mowing, herbicide and pesticide spraying, and fertilizer application because native plants are well adapted to their regions, they seldom need supplemental watering once they are established — conserving a precious resource.

Growing awareness of the Wildflower Center's work indicates more than an acceptance of our mission; it heralds a willingness to get involved and to make a difference.

As we celebrate Mrs. Johnson's eightieth birthday year, I invite you to help us spread our message and encourage these changes. Please take this opportunity to join Mrs. Johnson in celebrating her special birthday year, while helping preserve the natural beauty of our land for future generations.

Wildflower Center News

Founder: Lady Bird Johnson
Executive Director: David K. Northington, Ph.D.
Editor: Tela Goodwin Mange
Graphic Designer: Elaine Walker
Copy Editors: Flo Oxley, Angela Simpson
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The Clearnghouse has had an intern from Austin's Concordia Lutheran College during the summer and fall. John Slager is an environmental science major who plans to obtain a masters degree in botany. He recently joined a field trip to the rainforests of Hawaii to study the unique habitats there.

Media coverage of the Wildflower Center is still fabulous! CNN aired a terrific travel feature on the Wildflower Center as a tourist destination US News and World Report included the Center in a special video about Great Travel Destinations that will be offered as a special benefit to the magazine's subscribers.

Wildflower Center representatives will attend the National Tour Association trade show in November, providing a good opportunity to promote the Center to travel agents and tour operators who organize motorcoach tours. The result could mean busloads of visitors to the Center, but we have enough wildflowers for everyone to enjoy!

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Wildflower Center offers educational materials

One of the National Wildflower Research Center's primary goals is to provide vital and reliable information about conserving and using native plants in traditional landscape and gardening designs. To respond to the public's increasing awareness, enthusiasm, and interest in wildflowers and native plants, the Wildflower Center offers a number of programs and resources.

- **Fact Sheets** The Wildflower Center offers more than 250 individual fact sheets including recommended species lists for each state (species information is still being researched for Alaska, Hawaii, Nevada, and Utah), regional lists of native plant nurseries, and regional bibliographies. Basic information about gardening and landscaping with natives, wildflower meadow gardening, creating a prairie, and habitat gardening are also available.

- **A special Education Packet for teachers** is available and includes wildflower fun facts, alternatives to wildflower collection, how-tos on collecting and pressing wildflowers and seed collecting, an education bibliography, a bibliography of native plant uses, and parts of the flower.

- **Regional Slide Programs.** Slide shows featuring wildflowers found in six regions of the United States are available for lease or purchase from the Center's Clearinghouse. Each program consists of 35 to 40 slides of a particular region's most common native wildflowers and is accompanied by a script that lists each species' botanical and common names, bloom period, and habitat preference.

- **Publications.** The Center publishes a bimonthly newsletter and a biannual journal. The newsletter is geared toward home gardeners who want to incorporate native flora into their landscape and garden designs, while the journal targets an audience that includes members of the academic and scientific communities, as well as the layperson who wants more in-depth information on native flora.

Fact sheets are free to members and $4 per packet for non-members. For more information on materials and resources available at the Wildflower Center, contact the Clearinghouse at the address listed on the back page or use the order form above.

As it enters its second decade, the Wildflower Center will continue to respond to America's growing interest in wildflowers and native plants. Through our educational programs and materials, our members can help us teach others about the economic, aesthetic, and ecological importance of our native flora.

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Plant now for spring beauty!

well to severe pruning in the fall or late winter.

Because native plants are adapted to their environments, little or no chemical maintenance is required. Native plants come with their own “built-in” pesticides and fungicides. Once established, native plants will crowd out all but the most noxious weedy invaders, eliminating the need for herbicides.

Native plants usually do not require fertilizers. Many natives thrive in very poor soils and applying fertilizers could chemically burn them or stimulate lush foliage growth with few flowers. Fertilizers also stimulate the growth of unwanted species.

Mow only at the end of the bloom season. Mowing after the flowers have set seed will help reseed your wildflowers and produce a strong display next year.

By planting native species, you provide habitat and food resources for wildlife and encourage the presence of native insects and microorganisms that benefit plants and keep them healthy. With a little care, thought, and patience, your landscape can become an interacting, changing entity that offers a unique look into the complex interactions of the natural world — right in your own backyard.

F. M. Oxley
Resource Botanist
National Wildflower Research Center

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September/October 1993
Scientific Name: *Echinocereus engelmannii*

Common Names: Strawberry hedgehog cactus, calico cactus, purple torch

Family Name: Cactaceae

Habitat: Deserts in sandy, rocky well-draining soil

Range: Arizona, Southern California, Nevada, Utah, and northern Mexico

Bloom Period: April to June

A native to the southwestern U.S. and Sonoran deserts, the strawberry hedgehog cactus (*Echinocereus engelmannii*) is named for its spiny red fruits, which resemble strawberries. This low-lying cactus grows in clumps up to ten inches tall. Stems have ten to fourteen ribs and diameters of two to three inches.

The shaggy appearance of *E. engelmannii* is due to the dense covering of drooping white to yellowish spines. From areoles, ten to twelve radial spines about half an inch long encircle the two to six central spines, which can be three inches long. This thick spine coverage helps the cactus conserve moisture by shading the stems and reducing transpiration.

Around April, showy magenta flowers with an abundance of bright yellow anthers appear. A light pink style with up to ten stigmas protrudes from the center of the bloom. Blooms last about two weeks and are pollinated by bees or beetles. The fruit develops into an edible red “berry” that is spiny and rich in sugar. Sometimes called “cactus apple,” it is an important food source for birds, rodents, and desert tortoises.

The strawberry hedgehog cactus can be propagated by seed, which may require scarification before planting.

Sow seeds in a pot of normal cactus compost (equal parts loam, shredded sphagnum peat, and sharp gritty sand). Press seeds gently into soil and cover both pot and plant with plastic, which will maintain the essential humidity needed for germination. Place pot in a well-lit location, not in full sun. Germination may take two weeks. Do not allow seedlings to dry out. Watch for signs of fungal growth.

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Botanical Name: *Carnegiea gigantea*

Common Name: Saguaro

Family Name: Cactaceae

Habitat: Rocky and sandy desert slopes and flats

Range: Extreme southeastern portions of California to southern Arizona and northern Sonora

Bloom Period: May to June

The state flower of Arizona, the saguaro cactus is a prominent desert landscape feature. Averaging 30 to 40 feet in height, and sometimes reaching 50 feet, the saguaro grows at altitudes of 600 to 4,000 feet. In southern Arizona, large cactus forests are found between 1,000 and 4,000 feet.

Saguaro cacti grow slowly. The oldest plants are estimated at between 150 and 200 years old. Root systems are shallow and radiate out in all directions, enabling the saguaro to utilize even the lightest rainfall. However, the roots do not always provide stable anchorage. High winds can blow these huge cacti over.

The main stems can have a diameter of two and one-half feet and are a good example of nature’s ability to deal with a harsh environment. They are covered by spines and a thick waxy layer that helps the plant retain water.

Flowers are large, up to five inches in diameter, and have a waxy appearance. They open at night, producing a scent that attracts bats, moths, and a variety of insect pollinators.

The saguaro cactus has provided food and shelter for indigenous animals and people. Native Americans used the fruit pulp to make cactus jelly, oil extracted from the seeds was used in cooking, the seeds could be ground into a butter, and the fermented juice made an intoxicating drink.

September/October 1993
Arizona Native Plant Society (Tucson Chapter) Chiricahua Workshop, Sept 3-6, Portal, AZ. Contact: ANPS, P.O. Box 41206, Sun Station, Tucson AZ 85717.


Virginia Native Plant Society Annual Meeting, Sept 17-19, Manassas, VA. Contact: Prince William Wildflower Society, P.O. Box 83, Manassas, VA 22110.

Ecological Implications of Fire in Greater Yellowstone, Sept 19-21, Yellowstone Park, WY. Contact: Paul Schullery, Yellowstone Center for Resources, P.O. Box 168, Yellowstone Park, WY 52180, (307) 344-2205.

Environmental Concerns in Right of Way Management, Sept 19-22, Montreal, Quebec, Canada. Contact: Dr. C. Jean Doucet, Hydro-Quebec, 1010 Ste-Catherine St. East, 5th Floor, Montreal, Quebec, Canada H2L 2C3.

Autumn Wildflower Workshop, Sept 22-24, Goshers, NC. Contact: (704) 743-2411.

Eastern Native Plant Alliance Annual Conference, Sept 24-26, St. Louis. Contact: Eastern Native Plant Alliance, P.O. Box 6101, McLean, VA 22106, (703) 356-7425.

Fourth Symposium on Resources of the Chihuahuan Desert Region: United States and Mexico, Sept 31-Oct 2, El Paso, TX. Contact: Chihuahuan Desert Research Institute, P.O. Box 1334, Alpine, TX 79831.


Native Prairie Association of Texas, Oct 16, Tallgrass Prairie Preserve, OK. Field trip to watch Oklahoma Nature Conservancy release 300 buffalo on the prairie. Contact: NPAT, 301 Nature Center Dr., Austin, TX 78746.


Landscaping with Florida's Native Plants, Oct 23, Sarasota, FL. Contact: Florida Native Plant Society, P.O. Box 564, Sarasota, FL 34230, (813) 951-4240.

Freshwater Wetlands Communities, Oct 23, Fullerton, CA. Sponsored by the Southern California Botanists. Contact: Terry Dunber, SGB, Dept. of Biology, California State University, Fullerton, CA 92634, (714) 753-8579.

To include your organization's event in the calendar, send information to the Newsletter Editor at the address listed on the back page. Please send information at least four months in advance.

Questions, questions, questions! The Clearinghouse at the National Wildflower Research Center answers thousands of questions a year on wildflowers and native plants and how to grow them.

M. J. A. Isaac
Alpine, TX

A: The Wildflower Center is often asked to answer this question. Weeds are generally regarded as plants that are growing where you don't want them to, which implies noxious or aggressively growing plants living in disturbed areas or habitats that have been modified by humans. These areas include lawns, parking lots, and median strips on roads, as well as in our gardens. The plants often are unsightly and very difficult to remove. A weedy species that is displacing native and successfully naturalized plants is called an invasive weed.

Wildflowers are flowering plants capable of growing in wild, unimproved habitats without any help from human beings. These species are normally considered to be very attractive, with showy flowers, although there are species that some people would consider somewhat unattractive. Normally, a native wildflower is one that was growing in the wild before human introduction and is still growing within its natural range.

F. M. Oxley
Resource Botanist

(Editor's note: Many beautiful wildflower species are available from native plant nurseries throughout the United States. For more information on recommended species for your state and native plant nurseries in your region, contact the Clearinghouse at the address listed on the back page. Information packets are free to members and $4 for non-members.)
Night of the Wildflowers

WILDFLOWERS IN THE MOONLIGHT

Join the Wildflower Associates for an evening of moonlit entertainment and dining at the University of Texas’ Alumni Center in Austin on October 16 at 7:30 p.m.

Dance to the "country outlaw" music of Jerry Jeff Walker while sampling superb Texas regional cuisine. Also, be sure to bring your checkbook, so you can do some early holiday shopping at the fabulous Silent Auction.

Tickets to the event — the first ever sponsored by the Wildflower Associates — are $50 per person. Each party-goer will receive a one-year complimentary membership in the Wildflower Center.

For tickets or for more information, please call the Wildflower Center at (512) 929-3600.

Harvest a wealth of knowledge: Join the National Wildflower Research Center!

Members of the National Wildflower Research Center support wildflower and other native plant work across the nation. Benefits include Wildflowers, the newsletter; Wildflora, the journal; 10% discount on unique Center products such as wildflower books, calendars, and T-shirts; advance notice on tours and discount at Center campsites; free wildflower information from the Center's Caring House; membership card; and other benefits.

☐ $20 Supporting Member. All benefits listed above.
☐ $50 Sustaining Member. All the above plus a set of specially commissioned wildflower note cards.
☐ $100 Key Member. All the above plus wildflower tote bag and invitations to special events.
☐ $250 Center Sponsor. All the above plus full-color wildflower address book.
☐ $500 Trust Member and $1,000 Benefactor. All the above plus special privileges.

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Wildflowers Work!

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